

Amendments to the Claims:

The text of all pending claims, (including withdrawn claims) is set forth below. Canceled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (canceled), (withdrawn), (new), (previously presented), or (not entered).

Applicants reserve the right to pursue any canceled claims at a later date.

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1 – 11 (canceled)

12. (currently amended) A method for controlling the ~~a~~ transition between a normal operation ~~operating mode~~ ~~modes~~ of a direct fuel injected Otto ~~cycle~~ engine and an overrun fuel cut-off operation mode of the engine, comprising:

adjusting an ignition angle in a retarded ignition direction in order to reduce a torque jump; and

injecting fuel into a cylinder of the engine in the form of multiple injections, wherein a quantity of the injected fuel is injected into the engine during a compression phase of the Otto engine cycle ~~and when the Otto cycle engine is transitioning between a normal operation mode and an overrun fuel cut-off operation mode of the engine.~~

13. (previously presented) The method as claimed in claim 12, wherein the ignition angle is the crank shaft angle of rotation at the time an ignition signal is sent to a spark plug.

14. (previously presented) The method as claimed in claim 12, wherein the entire fuel quantity is injected in the compression phase.

15. (previously presented) The method as claimed in claim 12, wherein an engine intake air mass is reduced and then the ignition angle is decreased to a first minimum value which is predetermined for a reduced-air operating mode.

16. (previously presented) The method as claimed in claim 15, wherein a partial quantity of the injected fuel is injected during the compression phase after the first minimum value has been reached.

17. (previously presented) The method as claimed in claim 15, wherein the predetermined first minimum ignition angle provides stable combustion of a fuel-air mixture of the engine.

18. (previously presented) The method as claimed in claim 15, wherein the ignition angle is decreased to a second minimum value that is less than the first minimum value, the second minimum value being predetermined for the fuel injection.

19. (previously presented) The method as claimed in claim 18, wherein after the second minimum value has been attained, the fuel injection is cut off and the engine operation mode is switched from the normal operation mode to the overrun fuel cut-off operation mode.

20. (previously presented) The method as claimed in claim 19, wherein a partial quantity of the fuel is initially injected during the compression phase in order to return to the normal operation mode.

21. (previously presented) The method as claimed in claim 20, wherein the ignition angle is adjusted in the advanced ignition direction in order to increase the torque output of the engine.

22. (previously presented) The method as claimed in claim 21, wherein the switchover of the injection process from the compression phase to the intake phase occurs when a desired torque is attained.

23. (currently amended) A engine mode switchover apparatus that controls the ~~a~~
~~transition operation between a normal operation mode of an Otto engine and an overrun fuel cut-~~

~~off operation mode of the engine and a return to the normal operation mode of the engine,~~
comprising:

- a fuel injector that injects fuel into a cylinder of the engine;
- a device that determines a torque output of the engine;
- a device that measures an ignition angle;
- a device that stores a plurality of engine parameters;
- a device that adjusts the ignition angle and an intake air mass of the engine; and
- a device that controls the fuel injection having a control program, the control program adapted to reduce the ignition angle and subsequently inject the fuel into the cylinder during the compression phase of the engine and when the engine is transitioning between a normal operation mode and an overrun fuel cut-off operation and a subsequent return to normal operation of the engine.

24. (previously presented) The apparatus as claimed in claim 23, wherein the fuel is injected in a plurality of partial quantities.

25. (previously presented) The apparatus as claimed in claim 23, wherein the fuel injector injects the fuel directly into the cylinder.

26. (previously presented) The apparatus as claimed in claim 23, wherein the torque output of the engine is determined by a torque model.

27. (currently amended) An engine management system that controls ~~the~~ a transition between ~~a normal operation mode~~ operation of an Otto engine and ~~an overrun fuel cut-off operation mode of the engine and return to the normal operation mode of the engine~~, comprising:

- a device for determining an angle of rotation of a crank shaft of the engine;
- a throttle valve actuator;
- an engine speed sensor;
- a fuel injector that injects fuel directly into a cylinder of the engine;
- a device that determines a torque output of the engine;
- a device for measuring an ignition angle;

a device for storing a plurality of engine parameters;

a device for adjusting the ignition angle and an intake air mass of the engine; and

a device that controls the fuel injection having a control program, the control program adapted to reduce the ignition angle and subsequently inject the fuel into the cylinder during the compression phase of the engine and when the engine is transitioning between a normal operation and an overrun fuel cut-off operation mode and a subsequent return to normal operation mode of the engine.

28. (previously presented) The apparatus as claimed in claim 27, wherein the fuel is injected in a plurality of partial quantities.

29. (previously presented) The apparatus as claimed in claim 27, wherein the fuel injector injects the fuel directly into the cylinder.